Claims

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- A method of screening for therapeutic agents useful in the treatment of a
 disease comprised in a group of diseases consisting of disorders of the
 peripheral and central nervous system, cardiovascular diseases, cancer,
 gastroenterological diseases, endocrinological diseases and urological diseases
 in a mammal comprising the steps of
 - i) contacting a test compound with a PDE10A polypeptide,
- ii) detect binding of said test compound to said PDE10A polypeptide.
 - 2. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases in a mammal comprising the steps of
- i) determining the activity of a PDE10A polypeptide at a certain concentration of a test compound or in the absence of said test compound,
 - ii) determining the activity of said polypeptide at a different concentration of said test compound.
 - 3. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases in a mammal comprising the steps of

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- i) determining the activity of a PDE10A polypeptide at a certain concentration of a test compound,
- ii) determining the activity of a PDE10A polypeptide at the presence of a compound known to be a regulator of a PDE10A polypeptide.
- 4. The method of any of claims 1 to 3, wherein the step of contacting is in or at the surface of a cell.
- The method of any of claims 1 to 3, wherein the cell is in vitro.
 - 6. The method of any of claims 1 to 3, wherein the step of contacting is in a cell-free system.
- The method of any of claims 1 to 3, wherein the polypeptide is coupled to a detectable label.
 - 8. The method of any of claims 1 to 3, wherein the compound is coupled to a detectable label.
 - 9. The method of any of claims 1 to 3, wherein the test compound displaces a ligand which is first bound to the polypeptide.
- The method of any of claims 1 to 3, wherein the polypeptide is attached to a solid support.
 - 11. The method of any of claims 1 to 3, wherein the compound is attached to a solid support.
- 30 12. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of disorders of the

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peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases in a mammal comprising the steps of

- 5 i) contacting a test compound with a PDE10A polynucleotide,
 - ii) detect binding of said test compound to said PDE10A polynucleotide.
 - 13. The method of claim 12 wherein the nucleic acid molecule is RNA.
 - 14. The method of claim 12 wherein the contacting step is in or at the surface of a cell.
 - 15. The method of claim 12 wherein the contacting step is in a cell-free system.
 - 16. The method of claim 12 wherein polynucleotide is coupled to a detectable label.
- 17. The method of claim 12 wherein the test compound is coupled to a detectable label.
 - 18. A method of diagnosing a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases in a mammal comprising the steps of
 - i) determining the amount of a PDE10A polynucleotide in a sample taken from said mammal,
- 30 ii) determining the amount of PDE10A polynucleotide in healthy and/or diseased mammals.

- 19. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases in a mammal comprising a therapeutic agent which binds to a PDE10A polypeptide.
- 20. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases in a mammal comprising a therapeutic agent which regulates the activity of a PDE10A polypeptide.
- 21. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases in a mammal comprising a therapeutic agent which regulates the activity of a PDE10A polypeptide, wherein said therapeutic agent is

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- i) a small molecule,
- ii) an RNA molecule,
- iii) an antisense oligonucleotide,
- iv) a polypeptide,
- v) an antibody, or
- vi) a ribozyme.
- A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases,

endocrinological diseases and urological diseases in a mammal comprising a PDE10A polynucleotide.

- 23. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases in a mammal comprising a PDE10A polypeptide.
- Use of regulators of a PDE10A for the preparation of a pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases in a mammal.
 - 25. Method for the preparation of a pharmaceutical composition useful for the treatment of a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases in a mammal comprising the steps of
 - i) identifying a regulator of PDE10A,

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- determining whether said regulator ameliorates the symptoms of a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases in a mammal; and
- 30 iii) combining of said regulator with an acceptable pharmaceutical carrier.

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26. Use of a regulator of PDE10A for the regulation of PDE10A activity in a mammal having a disease comprised in a group of diseases consisting of disorders of the peripheral and central nervous system, cardiovascular diseases, cancer, gastroenterological diseases, endocrinological diseases and urological diseases.